CRYSTAL

High Resolution 3-5µm FPA Thermal Imaging Sensor

CRYSTAL is a three FOV, high resolution Thermal Imaging sensor utilizing a Focal Plane Array (FPA) detector sensitive in the 3-5µm spectral band, coupled to a dual-axis Micro-Scan mechanism, yielding high 512 x 512 sampling resolution.

CRYSTAL is built in a single unit, open frame, lightweight configuration, especially designed for easy on-gimbals installation and integration, in stabilized Electro-Optical payloads.

Applications

- Stabilized Gimballed E-O Payloads – Airborne, Heliborne or Naval
- Stabilized and non-stabilized mast mounted E-O sensor clusters
- Target acquisition systems
- Night Sight systems

Main Features

- 3-5µm Spectral Band
- InSb FPA Detector
- Micro-Scan mechanism
- Miniature Closed Cycle Cooler, integral with the Dewar
- Three FOVs
- Unique Non Uniformity Correction (NUC) algorithms
- Proprietary Image processing ASIC
- Single unit configuration for easy integration
- Lightweight
- Small dimensions

elop Electro-Optics Industries Ltd.

A Subsidiary of Elbit Systems

Catalog Number: 6510

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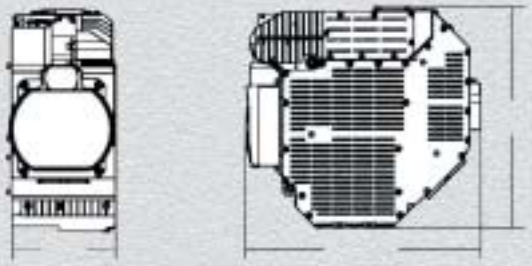
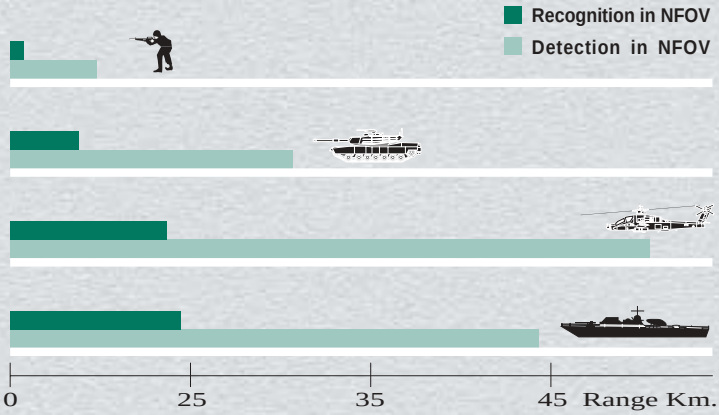
Technical Data

Spectral Band	3-5µm
Entrance Aperture (main)	100 mm
Fields of View:	
• Narrow	1.5˚ X 1.5˚
• Medium	5.25˚ x 5.25˚
• Wide	21˚ x 21˚
Detector:	
• Type	Focal Plane Array (FPA)
• Material	InSb
• No. of Elements	256 x 256
Micro-Scan	Dual Axis, Opto-Mechanical
Sampling Resolution	512 x 512
Cooler	Closed cycle, integral with Dewar
Video Output	CCIR, 625 lines, 50 Hz
Communication	Serial, Asynchronous, RS-422
Power Requirements:	
• Supply Voltage	24 VDC nominal
• Power Consumption	≤30 W



Configuration: Single unit, including electronics signal processing
Weight: 5.0 kg
Environmental:
• Designed and Tested to MIL-STD-810
• Operating Temperature Range: -20˚C - +60˚C
Reliability: **MTBF:** > 2000 hours

Range Performance



Note: Parameters may be altered to comply with customer specifications.
EL-OP - ELECTROOPTICS INDUSTRIES LTD. reserves the right to make such alterations in design, dimensions, specifications, and manufacture as are deemed necessary to ensure continued improvement.

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